

82



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,297	09/28/2001	Gregory E. Ehmann	VLSI321PA	5069

7590

08/13/2004

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EXAMINER

PERVEEN, REHANA

ART UNIT	PAPER NUMBER
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2116

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

82

Office Action Summary

Application No.

09/966,297

Applicant(s)

EHMANN ET AL.

Examiner

Rehana Perveen

Art Unit

2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-35 is/are allowed.
- 6) ☒ Claim(s) 1,3-8,14-17,19-24 and 30 is/are rejected.
- 7) ☒ Claim(s) 2,9-13,18 and 25-29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/26/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-7, 15-17, and 19-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Kennedy et al, Patent No. 6,536,025.

As to claim 1, Kennedy et al teach receiving parallel data concurrently transmitted in a plurality of multiple-bit groups, and realigning skew-caused misalignments between the groups after receiving the concurrently transmitted data (col. 2 lines 11-66).

As to claim 3, Kennedy et al teach controlling the skewing of the data in each group (col. 4 lines 8-19).

As to claim 4, Kennedy et al teach controlling the skewing of the data in each group occurs independent of each other group (col. 4 lines 8-22).

As to claim 5, Kennedy et al teach transmitting a clock signal for each group to synchronize the data in each group (strobe signal, col. 2 lines 59-66).

As to claim 6, Kennedy et al teach transmitting a data-valid indicator and using the data-valid indicator to control the reception of the data in each group (col. 4 lines 8-13).

As to claim 7, Kennedy et al teach transmitting the data-valid indicator is performed for each group of transmitted data (col. 4 lines 8-13).

Claims 15-17 and 19-23 are directed to the system implementing the method of claims 1 and 3-7. Kennedy et al teach the method as set forth in claims 1 and 3-7. Therefore, Kennedy et al also teach the system as set forth in claims 15-17 and 19-23.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 14, 24, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al, Patent No. 6,536,025, in view of Anonymous, Derwent Patent No. 1990-245433.

As to claim 8, Kennedy et al teach all of the limitations as stated above in claims 1, 6, and 7. However, Kennedy et al do not teach coding the data into coded-data values before the data is concurrently transmitted in the plurality of multiple-bit groups and wherein the data-valid indicator is a unique coded-data value. Anonymous teaches coding parallel data into coded-data values before the data is concurrently transmitted in a plurality of multiple-bit groups (abstract). Anonymous teaches coding all data to be transmitted (abstract). One of ordinary skill in the art at the time of the claimed invention would have been motivated to code any data-valid indicator or any special data as well and to identify the special data or a data-valid indicator using a unique coded-data value in order to separate it from the rest of the coded-data values.

It would have been obvious for one of ordinary skill in the art at the time of the claimed invention to combine the teachings of Kennedy et al and Anonymous because both are commonly directed to resolving the skew in parallel data transmission and Anonymous' coding technique, when incorporated into Kennedy et al, would have enabled improved reliability in parallel data transmission of the overall system.

As to claim 14, neither Kennedy et al nor Anonymous expressly teach coding the data from an 8-bit value to a 6-bit coded data value. Anonymous teaches using Manchester encoding of the data prior to transmission. One of ordinary skill in the art at the time of the claimed invention would have been motivated to code the data from an 8-bit value to a 6-bit coded data value since the benefits and advantages of such explicit numbers were quite well-known in the existing prior art systems for encoding data.

Claims 24 and 30 are directed to the system implementing the method of claims 8 and 14. Kennedy et al and Anonymous, in combination, teach the method as set forth in claims 8 and 14. Therefore, Kennedy et al and Anonymous, in combination, also teach the system as set forth in claims 24 and 30.

Allowable Subject Matter


Claims 31-35 are allowed over the prior art of record. The prior art of record, alone or in combination, do not teach concurrently transmitting data in each of a plurality of multiple-bit groups along with respective synchronization clock signal and a data-valid indicator, receiving the data by sampling the data at the synchronization clock signal, using the data-valid indicator to control the reception of the data in the group, and realigning skew-caused misalignments between the groups after using the data-valid indicator to control the reception of the data in the group.

Claims 2, 9-13, 18, and 25-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rehana Perveen whose telephone number is 703-305-8476. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on 703-308-1159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rehana Perveen
Primary Patent Examiner
Technology Center 2100